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*International Notes*

## Human Plague — India, 1994

Since August 26, 1994, outbreaks of bubonic and pneumonic plague have been reported in south-central, southwestern, and northern India. Because most of the reports are unconfirmed, the extent of the outbreaks is unclear. On August 26, following reports of a rat die-off, the first human cases were reported in Bir district, Maharashtra state, approximately 300 km east of Bombay. On September 22, cases of pneumonic plague were reported from the city of Surat, Gujarat state, approximately 200 km north of Bombay. As of September 26, several hundred pneumonic plague cases and numerous deaths have been reported from Surat. On September 26 and 27, cases were reported from Bombay and Calcutta, and on September 27, cases of pneumonic plague were reported from Delhi.

*Reported by: Div of Quarantine, National Center for Prevention Svcs; Bacterial Zoonoses Br, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.*

**Editorial Note:** Plague is caused by infection with *Yersinia pestis*, a bacterium carried by rodents and transmitted by fleas commonly found in parts of Asia, Africa, and North and South America (*1,2*). Sporadic human cases associated with epizootics in wild rodents occur annually in the western United States (*3*); however, no pneumonic plague cases resulting from person-to-person spread have been reported in the United States since 1924 (*1*). In India, large plague outbreaks occurred during the first half of the 20th century; however, the last laboratory-confirmed human cases were reported in 1966 (*4,5*). In 1992 (the most recent year for which complete data are available), human plague cases were reported from nine countries (Brazil, China, Madagascar, Mongolia, Myanmar, Peru, the United States, Vietnam, and Zaire) (*5*).

Most human plague is the bubonic form, which results from the bites of infected fleas; however, plague also can be transmitted to humans by handling infected animals or by inhaling infectious aerosols from persons with pneumonic plague. The incubation period for plague ranges from 1 to 7 days, and manifestations of the illness include rapid onset of fever, chills, headache, malaise, myalgias, and prostration, often with nausea. In particular, bubonic plague is characterized by painful swelling of lymph nodes (buboes) in the inguinal, axillary, or cervical regions; pneumonic plague is characterized by cough and dyspnea; and septicemic plague may result in fulminant

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gram-negative shock without localized signs of infection (2,*6*). Multiple clinical presentations can occur in one patient.

Travelers to India and other plague-endemic countries are at low risk for infection with *Y. pestis*. To reduce risk, travelers should avoid areas with recently reported human plague cases. Persons who must travel to these areas should 1) avoid rat-infested areas—especially areas where dead rats have been observed; 2) apply insect repellents to ankles and legs, and apply repellents and insecticides to clothing and outer bedding as directed by the manufacturer; 3) avoid handling dead or sick animals; and 4) if the risk for exposure is high, take prophylactic antibiotics. For adults, the preferred antibiotic for prophylaxis is tetracycline or doxycycline, and for children aged ≤8 years, sulfonamides (*2*). Because maximal antibody responses from plague vaccine require administration of multiple doses over several months, plague vaccine is not recommended for immediate protection during outbreaks.

International travelers should be advised to report immediately to a physician any febrile illness beginning within 7 days after leaving India. Although imported cases are expected to be rare, physicians should be alert for evidence of plague in persons who have traveled to plague-endemic areas and who developed a febrile illness within 7 days after leaving the area. All suspected plague patients should be hospitalized and isolated, specimens should be obtained from patients for laboratory diagnosis, chest roentgenogram should be performed, and antibiotic therapy should be promptly initiated. For all suspected cases, appropriate diagnostic specimens include blood for culture and serum antibodies; for suspected pneumonic cases, sputum samples; and for suspected bubonic cases, aspirates from affected lymph nodes. Streptomycin is the preferred drug for treatment of plague, but gentamicin, tetracyclines, and chloramphenicol also are effective (*2,7*). Prompt treatment can reduce overall plague mortality from 60%–100% to 10%–15%.

Prophylactic antibiotic treatment should be administered to all persons who have had face-to-face contact or who have occupied a closed space with a person with pneumonic plague. Household contacts of bubonic plague patients also should receive prophylactic antibiotic treatment.

Suspected human plague cases in international travelers should be reported through state and local health departments to CDC's Division of Quarantine, National Center for Prevention Services, telephone (404) 639-8107 or (404) 639-2888 (nights, Sundays, and holidays). Specimens for confirmatory testing can be submitted through state health departments to CDC. Inquiries about the availability of streptomycin should be directed to Pfizer, Inc.,* telephone (800) 254-4445. Additional informa- tion about plague is available to physicians and the general public from the CDC Voice Information System, telephone (404) 332-4555, and to physicians and laboratory personnel from CDC's Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, telephone (303) 221-6453.

*References*

1. Barnes AM. Surveillance and control of bubonic plague in the United States. In: Edwards MA, McDonnel U, eds. Animal disease in relation to conservation. New York: Academy Press, 1982:237–70.

*Use of trade names and commercial sources is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

*Human Plague — Continued*

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## *Current Trends*

### Update: Influenza Activity — Worldwide, 1994

From October 1993 through August 1994, influenza activity occurred at moderate to moderately severe levels worldwide. Influenza A(H3N2) viruses predominated during the 1993–94 season, but influenza B viruses also were isolated from persons with sporadic illness and from outbreak-associated cases. Cocirculation of influenza A(H3N2) and influenza B viruses is continuing throughout the world; however, the isolation of influenza A(H1N1) viruses has been extremely rare (*1*). This report summarizes influenza activity worldwide from March through August 1994.

**Africa.** In Africa, influenza activity occurred from May through July. Zambia and South Africa reported influenza B as the predominant virus isolated. South Africa identified sporadic cases of influenza A(H3N2).

**Asia.** Cocirculation of influenza A(H3N2) and influenza B viruses has been reported in Asia. During March and April, both influenza A and B were reported during outbreaks in Taiwan. Thailand reported influenza B in March and April and influenza A and B from May through July, with influenza B predominating. Hong Kong reported only influenza B through June; during July, moderate levels of influenza A(H3N2) activity occurred. Since March, only influenza B viruses have been isolated in China in association with outbreaks or sporadic cases of influenza-like illness (ILI).

**Europe.** In March, all reporting countries except Russia reported influenza activity either at or approaching normal levels. In Russia, influenza activity continued through March with the isolation of both influenza A and B viruses. Isolation of influenza A(H3N2) viruses from sporadic cases was reported in the United Kingdom in June. Since June, the Netherlands and the United Kingdom each have reported one influenza B isolate.

**North America.** In the United States, type A(H3N2) viruses from outbreaks continued to be reported in March along with isolates from sporadic cases that continued into April. Sporadic cases of influenza B occurred in March, April, and May. Influenza A viruses were isolated from six sporadic cases in July and August. Of these, three have been indentified as influenza A(H3N2). Canada reported the detection of both influenza A and B through the beginning of May.

**Central and South America.** Based on serologic studies, an increase in acute respiratory illness (ARI) in Panama in June was attributed to influenza A(H3N2). Sporadic isolation of influenza A and B viruses was reported in Argentina, Brazil, and Chile from April through June. In April, an outbreak of ARI associated with influenza A(H3N2)

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viruses was reported in Porto Velho, Brazil. Influenza A(H3N2) predominated in Santiago, Chile, in mid-July when ILI morbidity peaked.

**Oceania.** In Australia, influenza activity increased markedly by the end of June, and outbreaks occurred throughout the country in July. Epidemic-level activity was reported in mid-August in Newcastle. Although most isolates were influenza A(H3N2) viruses, influenza B viruses were isolated from sporadic cases. Outbreaks of influenza occurred in New Zealand from May through July; influenza A(H3N2) viruses were isolated more frequently than influenza B viruses.

**Characterization of influenza virus isolates.** From October 1, 1993, through August 31, 1994, 648 influenza isolates collected worldwide were antigenically characterized by the World Health Organization Collaborating Center for Surveillance, Epidemiology, and Control of Influenza at CDC. Of these, 369 (57%) were from North America, 155 (24%) from Asia, and 124 (19%) from Europe. Of 648 viruses analyzed, 519 (80%) were subtyped as influenza A(H3N2) viruses, and 129 (20%) were influenza B viruses. More than 99% of influenza A(H3N2) viruses analyzed were antigenically related to A/Beijing/32/92 (the vaccine strain for 1993–94); however, 125 (24%) of these viruses were more closely related to A/Shangdong/09/93, a variant of A/Beijing/32/92 that was selected for the vaccine strain for 1994–95 (*1*). Of the 129 influenza B viruses analyzed, 102 (79%) were closely related to the 1993–94 and 1994–95 influenza B vaccine strain, B/Panama/45/90. Although influenza A(H1N1) viruses have been isolated rarely, those characterized are similar antigenically to A/Texas/36/91, the 1994–95 vaccine strain.

*Reported by: World Health Organization National Influenza Centers, Communicable Disease Div, World Health Organization, Geneva. World Health Organization Collaborating Center for Surveillance, Epidemiology, and Control of Influenza, Influenza Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.*

**Editorial Note:** The antigenic components of influenza vaccine are updated annually to include viruses that are antigenically similar to the strains of the three distinct groups of influenza viruses that have been in worldwide circulation. The vaccine for the 1994–95 season contains A/Shangdong/09/93-like (H3N2), B/Panama/45/90-like, and A/Texas/36/91-like (H1N1) antigens . Most of the influenza viruses isolated since March 1994 are antigenically similar to the 1994–95 influenza vaccine strains. Based on recent patterns of worldwide influenza activity, both influenza type A(H3N2) and type B are expected to circulate in the United States during the 1994–95 influenza season.

Vaccination against influenza is recommended by the Advisory Committee on Immunization Practices for 1) persons aged ≥65 years; 2) persons who reside in nursing homes or other chronic-care facilities; 3) persons with chronic cardiovascular or pulmonary disorders, including children with asthma; 4) persons who required medical follow-up or hospitalization during the previous year because of diabetes and other chronic metabolic diseases, renal dysfunction, hemoglobinopathies, or immunosuppression; and 5) children and adolescents who are receiving long-term aspirin therapy and therefore may be at risk for developing Reye syndrome after influenza. In addition, vaccination is recommended for health-care workers and other persons who are in close contact with persons in high-risk groups, including household members.

The optimal time for organized vaccination campaigns is from mid-October through mid-November. However, persons at high risk who visit health-care providers for routine care or who are hospitalized should be offered influenza vaccine before the

*Influenza — Continued*

recommended time. In addition, health-care providers should continue to offer vaccine to high-risk persons even after influenza activity is documented in a community.

Information regarding influenza surveillance is available through the CDC Voice Information System (influenza update), telephone (404) 332-4555, or through the CDC Information Service on the Public Health Network electronic bulletin board. From October through May, the information is updated weekly. Periodic updates about influenza are published in the *MMWR*, and information on local influenza activity is available through county and state health departments.

*Reference*

1. CDC. Update: influenza activity—United States and worldwide, 1993–94 season, and composition of the 1994–95 influenza vaccine. MMWR 1994;43:179–83.

## *International Notes*

### Rift Valley Fever — Egypt, 1993

In June 1993, several persons in Aswan Governorate (1993 population: 952,000) in southern Egypt sought medical care for acute loss of vision following an illness characterized by fever, headache, retro-orbital pain, and myalgias. Ophthalmologists who examined these persons noted paramacular retinal hemorrhages and edema, and Rift Valley fever (RVF) was suspected; serologic studies of these patients confirmed the diagnosis of acute RVF (*1,2*). In August 1993, serologic surveys were conducted in two villages to estimate the prevalence of RVF virus (RVFV) antibody among persons residing in selected rural communities in Aswan Governorate. This report summarizes the findings of these serosurveys and two nested epidemiologic studies conducted in the same villages 2 weeks later.

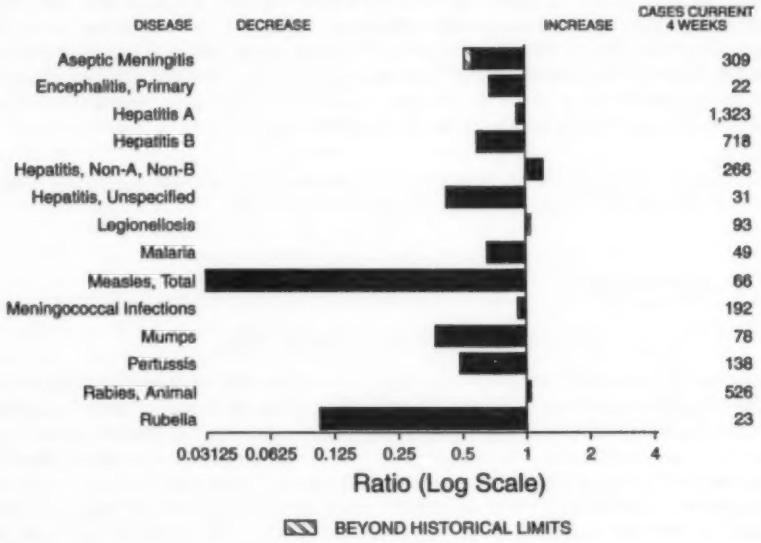
All persons aged >1 year in households randomly chosen for survey were interviewed, and a blood specimen was obtained with informed consent (with parents as proxy for children aged <10 years). Specimens were analyzed for immunoglobulin M (IgM) and immunoglobulin G (IgG) antibody by enzyme-linked immunosorbent assay (*3*).

In one village (population: 2400) that was chosen for survey because a fatal case of RVFV encephalitis occurred there, 39 (12%) of 326 persons in 42 households were seropositive for RVFV IgM antibody. In a nested case-control study with 20 RVFV IgM seropositive persons (cases) and three sex-, age- (±10 years), and neighborhood-matched seronegative persons (controls) per case, acute RVF was associated with contact with the blood of a slaughtered animal during the preceding 6 months (matched odds ratio [OR]=11.3; 95% confidence interval [CI]=1.3–102.7) and with sleeping outdoors every night (OR=9.3; 95% CI=1.7–52.6).

In the second village (population: 2600), 30 (8.4%) of 359 persons in 52 households were seropositive for RVFV IgM antibody. In a retrospective cohort study nested in the original survey, the risk for IgM seropositivity was associated with attending the slaughtering of an animal (relative risk [RR]=2.5; 95% CI=1.2–5.1), sleeping outdoors every night (RR=2.7; 95% CI=1.3–5.6), and having a history of schistosomiasis (RR=3.6; 95% CI=1.8–7.1). Of those children aged <13 years and born at least 2 years after the 1977 epidemic in Egypt, 28 (13%) of 215 had serologic evidence of RVFV infection (i.e.,

*(Continued on page 699)*

**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending September 24, 1994, with historical data — United States**




*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending September 24, 1994 (38th Week)**

| | Cum. 1994 | | Cum. 1994 |
|---|---|---|---|
| AIDS* | 53,556 | Measles: imported | 166 |
| Anthrax | - | indigenous | 665 |
| Botulism: Foodborne | 45 | Plague | 14 |
| Infant | 50 | Poliomyelitis, Paralytic† | 1 |
| Other | 6 | Psittacosis | 28 |
| Brucellosis | 70 | Rabies, human | 1 |
| Cholera | 10 | Syphilis, primary & secondary | 15,643 |
| Congenital rubella syndrome | 3 | Syphilis, congenital, age < 1 year† | 532 |
| Diphtheria | 1 | Tetanus | 25 |
| Encephalitis, post-infectious | 86 | Toxic shock syndrome | 138 |
| Gonorrhea | 277,666 | Trichinosis | 27 |
| *Haemophilus influenzae* (invasive disease)† | 848 | Tuberculosis | 15,461 |
| Hansen Disease | 84 | Tularemia | 70 |
| Leptospirosis | 23 | Typhoid fever | 317 |
| Lyme Disease | 7,873 | Typhus fever, tickborne (RMSF) | 326 |

*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update August 30, 1994.
†Of 809 cases of known age, 223 (28%) were reported among children less than 5 years of age.
§The remaining 5 suspected cases with onset in 1994 have not yet been confirmed. In 1993, 3 of 10 suspected cases were confirmed. Two of the confirmed cases of 1993 were vaccine-associated and one was classified as imported.
¶Total reported to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services, through first quarter 1994.

## TABLE II. Cases of selected notifiable diseases, United States, weeks ending September 24, 1994, and September 25, 1993 (38th Week)

| Reporting Area | AIDS* | Aseptic Meningitis | Encephalitis | | Gonorrhea | | Hepatitis (Viral), by type | | | | Legionellosis | Lyme Disease |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Primary | Post-infectious | | | A | B | NA,NB | Unspecified | | |
| | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1993 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 |
| UNITED STATES | 53,596 | 5,527 | 461 | 86 | 277,666 | 286,759 | 16,028 | 8,409 | 3,213 | 320 | 1,177 | 7,873 |
| NEW ENGLAND | 1,990 | 218 | 13 | 4 | 5,694 | 5,521 | 211 | 254 | 103 | 16 | 54 | 2,120 |
| Maine | 71 | 21 | 2 | - | 62 | 65 | 21 | 11 | - | - | 4 | 16 |
| N.H. | 44 | 21 | - | 2 | 78 | 43 | 13 | 17 | 8 | - | - | 17 |
| Vt. | 22 | 23 | 1 | - | 23 | 18 | 6 | - | - | - | - | 10 |
| Mass. | 1,031 | 64 | 8 | 1 | 2,300 | 2,177 | 84 | 159 | 75 | 14 | 39 | 178 |
| R.I. | 170 | 89 | 2 | 1 | 342 | 314 | 19 | 6 | 20 | 2 | 11 | 312 |
| Conn. | 652 | - | - | - | 2,889 | 2,904 | 68 | 61 | - | - | - | 1,587 |
| MID. ATLANTIC | 16,214 | 594 | 40 | 15 | 30,031 | 32,099 | 1,220 | 1,053 | 365 | 9 | 184 | 4,673 |
| Upstate N.Y. | 1,504 | 278 | 21 | 2 | 7,139 | 7,079 | 410 | 284 | 181 | 5 | 47 | 2,932 |
| N.Y. City | 9,831 | 106 | 6 | 5 | 10,249 | 8,604 | 485 | 243 | 1 | - | 8 | 12 |
| N.J. | 3,252 | - | - | - | 3,830 | 3,042 | 218 | 275 | 154 | - | 33 | 1,000 |
| Pa. | 1,627 | 210 | 13 | 8 | 8,813 | 13,374 | 107 | 251 | 29 | 4 | 96 | 729 |
| E.N. CENTRAL | 4,228 | 999 | 117 | 20 | 53,324 | 60,638 | 1,571 | 826 | 229 | 8 | 365 | 74 |
| Ohio | 797 | 265 | 36 | 3 | 15,802 | 16,608 | 630 | 125 | 17 | - | 167 | 52 |
| Ind. | 441 | 145 | 10 | 1 | 6,366 | 6,122 | 282 | 141 | 9 | - | 96 | 13 |
| Ill. | 2,035 | 222 | 39 | 5 | 13,412 | 20,062 | 306 | 163 | 44 | 3 | 20 | 4 |
| Mich. | 703 | 360 | 28 | 11 | 12,977 | 12,993 | 206 | 281 | 156 | 5 | 57 | 5 |
| Wis. | 252 | 7 | 4 | - | 4,767 | 4,853 | 147 | 116 | 3 | - | 25 | - |
| W.N. CENTRAL | 1,083 | 293 | 21 | 6 | 15,081 | 16,266 | 767 | 467 | 126 | 11 | 95 | 177 |
| Minn. | 274 | 20 | 2 | - | 2,435 | 1,669 | 165 | 46 | 17 | 1 | 1 | 119 |
| Iowa | 59 | 87 | - | 1 | 1,109 | 1,207 | 44 | 24 | 8 | 9 | 28 | 13 |
| Mo. | 486 | 108 | 7 | 4 | 8,706 | 9,905 | 356 | 349 | 79 | 1 | 42 | 28 |
| N. Dak. | 18 | 10 | 3 | - | 18 | 35 | 4 | - | - | - | 4 | - |
| S. Dak. | 11 | 2 | 2 | - | 137 | 197 | 30 | 2 | - | - | 1 | - |
| Nebr. | 65 | 14 | 4 | 1 | - | 484 | 89 | 19 | 8 | - | 14 | 9 |
| Kans. | 170 | 52 | 3 | - | 2,674 | 2,769 | 79 | 27 | 14 | - | 5 | 8 |
| S. ATLANTIC | 11,932 | 1,091 | 102 | 28 | 77,657 | 73,789 | 1,064 | 1,794 | 484 | 32 | 263 | 528 |
| Del. | 186 | 30 | 1 | - | 1,396 | 1,045 | 16 | 4 | 1 | - | 26 | 39 |
| Md. | 1,597 | 188 | 17 | 4 | 13,243 | 11,709 | 149 | 295 | 27 | 7 | 66 | 260 |
| D.C. | 986 | 45 | - | 1 | 5,355 | 3,432 | 18 | 40 | - | - | 9 | 6 |
| Va. | 776 | 190 | 26 | 6 | 9,821 | 8,648 | 126 | 92 | 20 | 5 | 6 | 113 |
| W. Va. | 40 | 22 | 21 | - | 580 | 454 | 10 | 29 | 23 | - | 3 | 15 |
| N.C. | 887 | 181 | 36 | 1 | 20,075 | 18,576 | 100 | 211 | 50 | - | 19 | 69 |
| S.C. | 780 | 24 | - | - | 9,676 | 7,873 | 31 | 25 | 7 | - | 10 | 7 |
| Ga. | 1,371 | 47 | 1 | - | - | 4,660 | 24 | 523 | 167 | - | 92 | 99 |
| Fla. | 5,305 | 364 | - | 14 | 17,509 | 17,392 | 590 | 575 | 189 | 20 | 32 | 18 |
| E.S. CENTRAL | 1,441 | 371 | 28 | 2 | 33,086 | 33,146 | 406 | 785 | 645 | 2 | 48 | 34 |
| Ky. | 226 | 124 | 12 | 1 | 3,667 | 3,496 | 116 | 62 | 21 | - | 8 | 17 |
| Tenn. | 483 | 76 | 10 | - | 9,789 | 10,378 | 163 | 662 | 609 | 1 | 25 | 11 |
| Ala. | 422 | 132 | 5 | 1 | 11,742 | 11,579 | 77 | 61 | 15 | 1 | 11 | 6 |
| Miss. | 310 | 39 | 1 | - | 7,888 | 7,693 | 50 | - | - | - | 4 | - |
| W.S. CENTRAL | 5,361 | 618 | 41 | 2 | 35,136 | 32,834 | 2,362 | 1,107 | 424 | 65 | 36 | 96 |
| Ark. | 182 | 38 | - | - | 5,018 | 5,077 | 151 | 22 | 7 | 1 | 7 | 8 |
| La. | 864 | 26 | 5 | - | 8,774 | 8,863 | 120 | 129 | 128 | 1 | 12 | 1 |
| Okla. | 193 | - | - | - | 2,957 | 3,471 | 227 | 243 | 236 | 1 | 11 | 52 |
| Tex. | 4,122 | 554 | 36 | 2 | 18,389 | 15,423 | 1,884 | 713 | 53 | 62 | 6 | 35 |
| MOUNTAIN | 1,551 | 217 | 8 | 3 | 8,305 | 8,487 | 3,028 | 473 | 342 | 42 | 69 | 13 |
| Mont. | 18 | 7 | - | - | 66 | 53 | 18 | 21 | 10 | - | 14 | - |
| Idaho | 45 | 5 | - | - | 65 | 139 | 260 | 65 | 64 | 1 | 1 | 3 |
| Wyo. | 16 | 4 | 2 | 2 | 57 | 64 | 24 | 20 | 131 | - | 4 | 3 |
| Colo. | 580 | 89 | 1 | - | 2,262 | 2,816 | 375 | 78 | 55 | 13 | 15 | - |
| N. Mex. | 118 | 12 | - | - | 707 | 711 | 857 | 162 | 43 | 9 | 3 | 5 |
| Ariz. | 421 | 44 | - | - | 2,358 | 3,004 | 964 | 30 | 8 | 11 | 7 | - |
| Utah | 96 | 30 | 1 | 1 | 178 | 333 | 366 | 56 | 19 | 1 | 7 | 1 |
| Nev. | 257 | 26 | 4 | - | 612 | 1,367 | 164 | 41 | 12 | 7 | 18 | 1 |
| PACIFIC | 9,796 | 1,126 | 91 | 8 | 21,350 | 25,979 | 5,379 | 1,650 | 495 | 135 | 63 | 60 |
| Wash. | 636 | - | - | - | 2,134 | 2,827 | 267 | 53 | 52 | 1 | 6 | - |
| Oreg. | 431 | - | - | - | 570 | 900 | 413 | 38 | 14 | 1 | - | - |
| Calif. | 8,570 | 1,013 | 89 | 7 | 17,528 | 21,414 | 4,487 | 1,526 | 423 | 130 | 54 | 60 |
| Alaska | 32 | 16 | 2 | - | 648 | 461 | 168 | 9 | - | - | - | - |
| Hawaii | 127 | 97 | - | 1 | 470 | 377 | 44 | 24 | 6 | 3 | 3 | - |
| Guam | 1 | 9 | - | - | 91 | 75 | 23 | 2 | - | 7 | 2 | - |
| P.R. | 1,578 | 24 | - | 3 | 333 | 374 | 50 | 257 | 111 | 10 | - | - |
| V.I. | 34 | - | - | - | 20 | 79 | - | 1 | - | - | - | - |
| Amer. Samoa | - | - | - | - | 21 | 37 | 7 | - | - | - | - | - |
| C.N.M.I. | - | - | - | - | 34 | 67 | 4 | 1 | - | - | - | - |

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update August 30, 1994.

## TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 24, 1994, and September 25, 1993 (38th Week)

| Reporting Area | Malaria | Measles (Rubeola) | | | | | Meningococcal Infections | Mumps | | Pertussis | | | Rubella | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Indigenous | | Imported* | | Total | | | | | | | | | |
| | Cum. 1994 | 1994 | Cum. 1994 | 1994 | Cum. 1994 | Cum. 1993 | Cum. 1994 | 1994 | Cum. 1994 | 1994 | Cum. 1994 | Cum. 1993 | 1994 | Cum. 1994 | Cum. 1993 |
| UNITED STATES | 753 | - | 685 | - | 166 | 265 | 1,957 | 20 | 1,026 | 92 | 2,420 | 4,159 | 1 | 208 | 164 |
| NEW ENGLAND | 59 | - | 14 | - | 14 | 61 | 100 | - | 16 | 13 | 265 | 546 | - | 127 | 1 |
| Maine | 4 | - | 1 | - | 4 | 1 | 19 | - | 3 | - | 12 | 15 | - | - | 1 |
| N.H. | 3 | - | 1 | - | - | 2 | 6 | - | 4 | 1 | 52 | 130 | - | - | - |
| Vt. | 3 | - | 2 | - | 1 | 31 | 2 | - | - | 4 | 35 | 65 | - | - | - |
| Mass. | 27 | - | 2 | - | 6 | 17 | 41 | - | 1 | 8 | 139 | 275 | - | 123 | - |
| R.I. | 6 | - | 4 | - | 3 | 1 | - | - | 2 | - | 5 | 7 | - | 2 | - |
| Conn. | 16 | - | 4 | - | - | 9 | 32 | - | 6 | - | 22 | 54 | - | 2 | - |
| MID. ATLANTIC | 148 | - | 109 | - | 23 | 21 | 198 | 7 | 87 | 35 | 445 | 662 | - | 9 | 58 |
| Upstate N.Y. | 39 | - | 12 | - | 3 | 5 | 69 | 2 | 24 | 4 | 182 | 212 | - | 6 | 16 |
| N.Y. City | 55 | - | 14 | - | 3 | 7 | 11 | 3 | 11 | 2 | 82 | 49 | - | 1 | 22 |
| N.J. | 33 | - | 139 | - | 14 | 9 | 47 | - | 6 | - | 10 | 68 | - | 2 | 15 |
| Pa. | 21 | - | 4 | - | 3 | - | 69 | 2 | 46 | 29 | 171 | 333 | - | - | 5 |
| E.N. CENTRAL | 76 | - | 59 | - | 41 | 28 | 313 | - | 161 | - | 306 | 1,030 | - | 11 | 7 |
| Ohio | 12 | - | 15 | - | - | 9 | 86 | - | 42 | - | 106 | 246 | - | - | 1 |
| Ind. | 13 | - | - | - | 1 | - | 51 | - | 7 | - | 48 | 90 | - | - | 2 |
| Ill. | 31 | - | 17 | - | 39 | 9 | 98 | - | 75 | - | 68 | 345 | - | 3 | 1 |
| Mich. | 18 | - | 24 | - | 1 | 6 | 47 | - | 33 | - | 35 | 60 | - | 8 | 2 |
| Wis. | 2 | - | 3 | - | - | 4 | 31 | - | 4 | - | 49 | 289 | - | - | 1 |
| W.N. CENTRAL | 32 | - | 126 | - | 44 | 3 | 135 | 1 | 49 | 6 | 128 | 357 | - | 2 | 1 |
| Minn. | 11 | - | - | - | - | - | 11 | - | 5 | - | 51 | 190 | - | - | - |
| Iowa | 4 | - | 6 | - | 1 | - | 18 | 1 | 13 | - | 9 | 27 | - | - | - |
| Mo. | 11 | - | 118 | - | 42 | 1 | 68 | - | 26 | - | 33 | 103 | - | 2 | 1 |
| N. Dak. | 1 | - | - | - | - | - | 1 | - | 3 | - | 4 | 5 | - | - | - |
| S. Dak. | - | - | - | - | - | - | 8 | - | - | 6 | 14 | 8 | - | - | - |
| Nebr. | 3 | - | 1 | - | 1 | - | 9 | - | 2 | - | 7 | 8 | - | - | - |
| Kans. | 2 | - | 1 | - | - | 2 | 20 | - | - | - | 10 | 16 | - | - | - |
| S. ATLANTIC | 162 | - | 49 | - | 6 | 26 | 336 | - | 150 | 2 | 232 | 355 | - | 11 | 6 |
| Del. | 3 | - | - | - | - | - | 5 | - | - | - | 2 | 9 | - | - | - |
| Md. | 78 | - | 2 | - | 2 | 4 | 30 | - | 46 | - | 66 | 101 | - | - | 2 |
| D.C. | 12 | - | - | - | - | - | 4 | - | - | 2 | 7 | 11 | - | - | - |
| Va. | 21 | - | 1 | - | 1 | 2 | 53 | - | 35 | - | 29 | 50 | - | - | - |
| W. Va. | - | - | 36 | - | - | - | 12 | - | 3 | - | 4 | 8 | - | - | - |
| N.C. | 9 | - | 2 | - | 1 | - | 42 | - | 36 | - | 56 | 52 | - | - | - |
| S.C. | 4 | - | - | - | - | - | 19 | - | 7 | - | 12 | 13 | - | - | - |
| Ga. | 19 | - | 2 | - | - | - | 65 | - | 8 | - | 22 | 41 | - | 2 | - |
| Fla. | 16 | - | 6 | - | 2 | 20 | 106 | - | 15 | - | 32 | 70 | - | 9 | 4 |
| E.S. CENTRAL | 27 | - | 28 | - | - | 1 | 116 | - | 18 | 2 | 113 | 251 | - | - | - |
| Ky. | 9 | - | - | - | - | - | 33 | - | - | - | 57 | 34 | - | - | - |
| Tenn. | 8 | - | 28 | - | - | - | 26 | - | 7 | - | 18 | 153 | - | - | - |
| Ala. | 9 | - | - | - | - | 1 | 57 | - | 5 | 2 | 31 | 54 | - | - | - |
| Miss. | 1 | - | - | - | - | - | - | - | 6 | - | 7 | 10 | - | - | - |
| W.S. CENTRAL | 35 | - | 9 | - | 7 | 10 | 249 | 11 | 203 | 1 | 109 | 115 | - | 12 | 17 |
| Ark. | 3 | - | - | - | 1 | - | 38 | - | 1 | 1 | 22 | 8 | - | - | - |
| La. | 6 | - | - | - | 1 | 1 | 29 | - | 22 | - | 10 | 9 | - | - | 1 |
| Okla. | 3 | - | - | - | - | - | 25 | - | 23 | - | 22 | 56 | - | 4 | 1 |
| Tex. | 23 | - | 9 | - | 5 | 9 | 157 | 11 | 157 | - | 55 | 42 | - | 8 | 15 |
| MOUNTAIN | 24 | - | 148 | - | 17 | 5 | 127 | - | 116 | 5 | 312 | 304 | - | 6 | 10 |
| Mont. | - | - | - | - | - | - | 6 | - | - | 2 | 6 | 7 | - | - | - |
| Idaho | 2 | - | - | - | - | - | 15 | - | 7 | 2 | 44 | 85 | - | - | 1 |
| Wyo. | 1 | - | - | - | - | - | 6 | - | 2 | - | - | 1 | - | - | - |
| Colo. | 11 | - | 16 | - | 3 | 3 | 28 | - | 2 | 1 | 109 | 101 | - | - | 2 |
| N. Mex. | 3 | - | - | - | - | - | 13 | N | N | - | 20 | 34 | - | 1 | - |
| Ariz. | 1 | - | 1 | - | 1 | 1 | 41 | - | 80 | - | 115 | 48 | - | - | 2 |
| Utah | 4 | - | 131 | - | 2 | - | 15 | - | 12 | - | 16 | 27 | - | 4 | 4 |
| Nev. | 2 | - | - | - | 11 | 1 | 5 | - | 12 | - | 2 | 3 | - | 1 | 1 |
| PACIFIC | 190 | - | 63 | - | 14 | 110 | 395 | 1 | 226 | 28 | 510 | 539 | 1 | 30 | 64 |
| Wash. | 7 | - | - | - | - | - | 28 | - | 6 | - | 28 | 56 | - | - | - |
| Oreg. | 10 | - | - | - | 1 | 4 | 67 | N | N | - | 38 | 41 | - | 2 | - |
| Calif. | 158 | - | 56 | - | 9 | 84 | 284 | 1 | 201 | 27 | 429 | 433 | 1 | 23 | 35 |
| Alaska | 1 | - | 7 | - | - | 2 | 2 | - | 3 | 1 | 1 | 5 | - | 1 | 1 |
| Hawaii | 14 | - | - | - | 4 | 20 | 6 | - | 16 | - | 16 | 4 | - | 4 | 28 |
| Guam | 3 | U | 211 | U | - | 2 | 1 | U | 4 | U | 2 | - | U | 1 | - |
| P.R. | 2 | - | 13 | - | - | 338 | 14 | - | 2 | - | 1 | 6 | - | - | - |
| V.I. | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - |
| Amer. Samoa | - | U | - | U | - | - | - | U | 1 | U | 2 | 2 | U | - | - |
| C.N.M.I. | 1 | U | 26 | U | - | 1 | - | U | 2 | U | - | 1 | U | - | - |

*For measles only, imported cases include both out-of-state and international importations.
N: Not notifiable U: Unavailable † International § Out-of-state

## TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending September 24, 1994, and September 25, 1993 (38th Week)

| Reporting Area | Syphilis (Primary & Secondary) | | Toxic-Shock Syndrome | Tuberculosis | | Tula-remia | Typhoid Fever | Typhus Fever (Tick-borne) (RMSF) | Rabies, Animal |
|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1994 | Cum. 1993 | Cum. 1994 | Cum. 1994 | Cum. 1993 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 |
| UNITED STATES | 15,643 | 19,565 | 138 | 15,461 | 16,372 | 70 | 317 | 326 | 4,584 |
| NEW ENGLAND | 166 | 252 | 4 | 367 | 365 | 1 | 22 | 13 | 1,358 |
| Maine | 4 | 4 | 1 | 21 | 17 | - | - | - | - |
| N.H. | 3 | 22 | - | 14 | 15 | - | - | - | 112 |
| Vt. | - | 1 | 1 | 7 | 4 | - | - | - | 104 |
| Mass. | 72 | 105 | 2 | 186 | 202 | 1 | 18 | 8 | 519 |
| R.I. | 12 | 11 | - | 35 | 46 | - | 1 | - | 44 |
| Conn. | 75 | 109 | - | 104 | 81 | - | 3 | 5 | 579 |
| MID. ATLANTIC | 1,003 | 1,716 | 23 | 3,073 | 3,435 | 1 | 86 | 14 | 584 |
| Upstate N.Y. | 127 | 181 | 13 | 238 | 511 | 1 | 8 | 5 | 207 |
| N.Y. City | 437 | 826 | - | 1,890 | 2,044 | - | 60 | 1 | - |
| N.J. | 163 | 220 | - | 563 | 379 | - | 17 | 2 | 208 |
| Pa. | 276 | 509 | 10 | 382 | 501 | - | 1 | 6 | 169 |
| E.N. CENTRAL | 2,094 | 3,175 | 27 | 1,536 | 1,648 | 8 | 57 | 41 | 47 |
| Ohio | 882 | 885 | 9 | 250 | 229 | 1 | 6 | 24 | 4 |
| Ind. | 186 | 272 | 2 | 134 | 164 | 2 | 6 | 5 | 12 |
| Ill. | 585 | 1,212 | 7 | 786 | 870 | 3 | 34 | 10 | 13 |
| Mich. | 211 | 427 | 9 | 322 | 320 | 1 | 4 | 2 | 10 |
| Wis. | 230 | 379 | - | 44 | 65 | 1 | 7 | - | 8 |
| W.N. CENTRAL | 890 | 1,272 | 20 | 415 | 341 | 29 | 1 | 28 | 152 |
| Minn. | 40 | 49 | 1 | 95 | 42 | 1 | - | - | 13 |
| Iowa | 46 | 54 | 7 | 43 | 39 | - | - | 1 | 65 |
| Mo. | 764 | 1,051 | 5 | 183 | 176 | 19 | 1 | 13 | 14 |
| N. Dak. | - | 4 | 1 | 7 | 6 | - | - | - | 8 |
| S. Dak. | - | 2 | - | 20 | 11 | 1 | - | 10 | 24 |
| Nebr. | - | 10 | 2 | 18 | 16 | 2 | - | 1 | - |
| Kans. | 40 | 102 | 4 | 49 | 51 | 6 | - | 3 | 28 |
| S. ATLANTIC | 4,537 | 4,988 | 7 | 2,621 | 3,311 | 2 | 42 | 154 | 1,482 |
| Del. | 21 | 86 | - | 26 | 36 | - | 1 | - | 41 |
| Md. | 213 | 270 | - | 227 | 283 | 1 | 11 | 14 | 405 |
| D.C. | 167 | 259 | - | 95 | 127 | - | 1 | - | 2 |
| Va. | 599 | 470 | 1 | 214 | 309 | - | 7 | 15 | 298 |
| W. Va. | 8 | 10 | - | 60 | 61 | - | - | 2 | 59 |
| N.C. | 1,245 | 1,418 | 1 | 355 | 375 | - | - | 54 | 127 |
| S.C. | 579 | 734 | - | 266 | 288 | - | - | 12 | 139 |
| Ga. | 1,116 | 837 | 1 | 591 | 571 | 1 | 2 | 54 | 281 |
| Fla. | 589 | 904 | 4 | 787 | 1,261 | - | 20 | 3 | 130 |
| E.S. CENTRAL | 2,809 | 2,942 | 4 | 976 | 1,181 | - | 2 | 26 | 142 |
| Ky. | 155 | 249 | 2 | 237 | 278 | - | 1 | 7 | 14 |
| Tenn. | 742 | 847 | 2 | 289 | 356 | - | 1 | 13 | 34 |
| Ala. | 518 | 820 | - | 306 | 371 | - | - | 2 | 94 |
| Miss. | 1,394 | 1,226 | - | 144 | 178 | - | - | 4 | - |
| W.S. CENTRAL | 3,400 | 4,125 | 1 | 2,181 | 1,876 | 17 | 11 | 37 | 514 |
| Ark. | 374 | 413 | - | 218 | 140 | 16 | - | 7 | 24 |
| La. | 1,318 | 1,904 | - | 94 | 192 | - | 3 | - | 55 |
| Okla. | 100 | 235 | 1 | 198 | 110 | 1 | 2 | 25 | 28 |
| Tex. | 1,608 | 1,573 | - | 1,671 | 1,434 | - | 6 | 5 | 407 |
| MOUNTAIN | 186 | 184 | 7 | 375 | 403 | 9 | 9 | 13 | 110 |
| Mont. | 3 | 1 | - | 9 | 13 | 3 | - | 4 | 14 |
| Idaho | 1 | - | 1 | 11 | 10 | - | - | - | 3 |
| Wyo. | - | 7 | - | 8 | 2 | - | - | 2 | 17 |
| Colo. | 101 | 57 | 4 | 21 | 64 | 1 | 3 | 4 | 10 |
| N. Mex. | 18 | 24 | - | 43 | 46 | 1 | 1 | 1 | 6 |
| Ariz. | 33 | 77 | - | 169 | 163 | - | 1 | 1 | 39 |
| Utah | 7 | 4 | 2 | 38 | 25 | 2 | 2 | - | 14 |
| Nev. | 23 | 14 | - | 76 | 80 | 2 | 2 | 1 | 7 |
| PACIFIC | 558 | 911 | 45 | 3,917 | 3,812 | 3 | 87 | - | 195 |
| Wash. | 28 | 45 | 2 | 203 | 190 | - | 3 | - | - |
| Oreg. | 21 | 36 | - | 90 | - | 2 | 4 | - | 8 |
| Calif. | 503 | 819 | 40 | 3,388 | 3,384 | - | 76 | - | 158 |
| Alaska | 4 | 6 | - | 42 | 46 | 1 | - | - | 29 |
| Hawaii | 2 | 5 | 3 | 194 | 192 | - | 4 | - | - |
| Guam | 4 | 3 | - | 84 | 42 | - | 1 | - | - |
| P.R. | 217 | 395 | - | 120 | 165 | - | - | - | 51 |
| V.I. | 24 | 34 | - | - | 2 | - | - | - | - |
| Amer. Samoa | 1 | - | - | 4 | 4 | - | 1 | - | - |
| C.N.M.I. | 2 | 3 | - | 24 | 26 | - | 1 | - | - |

U: Unavailable

# TABLE III. Deaths in 121 U.S. cities,* week ending September 24, 1994 (38th Week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I† Total |
|---|---|---|---|---|---|---|---|
| | All Ages | ≥65 | 45-64 | 25-44 | 1-24 | <1 | |
| NEW ENGLAND | 583 | 447 | 72 | 39 | 15 | 10 | 41 |
| Boston, Mass. | 149 | 104 | 21 | 12 | 6 | 6 | 17 |
| Bridgeport, Conn. | 33 | 21 | 3 | 6 | 3 | - | 3 |
| Cambridge, Mass. | 25 | 19 | 4 | 2 | - | - | 1 |
| Fall River, Mass. | 36 | 33 | 2 | - | - | 1 | - |
| Hartford, Conn. | 40 | 29 | 4 | 5 | - | 2 | 2 |
| Lowell, Mass. | 30 | 24 | 4 | 1 | 1 | - | 1 |
| Lynn, Mass. | 17 | 14 | 2 | 1 | - | - | - |
| New Bedford, Mass. | 34 | 28 | 3 | 3 | - | - | 1 |
| New Haven, Conn. | 40 | 32 | 6 | 2 | - | - | 3 |
| Providence, R.I. | 28 | 24 | 2 | 1 | 1 | - | 2 |
| Somerville, Mass. | 6 | 5 | 1 | - | - | - | - |
| Springfield, Mass. | 59 | 47 | 8 | 3 | 1 | - | 6 |
| Waterbury, Conn. | 32 | 24 | 4 | 2 | 2 | - | - |
| Worcester, Mass. | 54 | 43 | 8 | 1 | 1 | 1 | 4 |
| MID. ATLANTIC | 2,021 | 1,293 | 377 | 272 | 42 | 37 | 92 |
| Albany, N.Y. | 45 | 30 | 7 | 5 | 1 | 2 | - |
| Allentown, Pa. | 14 | 12 | 1 | 1 | - | - | - |
| Buffalo, N.Y. | U | U | U | U | U | U | U |
| Camden, N.J. | 34 | 17 | 10 | 6 | 1 | - | - |
| Elizabeth, N.J. | 21 | 15 | 3 | 3 | - | - | 1 |
| Erie, Pa.§ | 27 | 25 | 2 | - | - | - | - |
| Jersey City, N.J. | 51 | 31 | 9 | 6 | - | 5 | - |
| New York City, N.Y. | 1,336 | 823 | 260 | 205 | 33 | 15 | 53 |
| Newark, N.J. | 51 | 20 | 16 | 11 | 3 | 1 | - |
| Paterson, N.J. | 30 | 13 | 9 | 5 | - | 3 | 2 |
| Philadelphia, Pa. | U | U | U | U | U | U | U |
| Pittsburgh, Pa.§ | 57 | 42 | 10 | 4 | - | 1 | 6 |
| Reading, Pa. | 13 | 10 | 2 | 1 | - | - | 2 |
| Rochester, N.Y. | 136 | 102 | 25 | 6 | 1 | 2 | 18 |
| Schenectady, N.Y. | 28 | 22 | 5 | 1 | - | - | 1 |
| Scranton, Pa.§ | 18 | 15 | 1 | 2 | - | - | - |
| Syracuse, N.Y. | 94 | 73 | 12 | 5 | 2 | 2 | 6 |
| Trenton, N.J. | 29 | 14 | 2 | 7 | 1 | 5 | - |
| Utica, N.Y. | 12 | 10 | 1 | 1 | - | - | 1 |
| Yonkers, N.Y. | 25 | 19 | 2 | 3 | - | 1 | 2 |
| E.N. CENTRAL | 2,182 | 1,345 | 401 | 257 | 121 | 58 | 102 |
| Akron, Ohio | 51 | 37 | 9 | 2 | 2 | 1 | - |
| Canton, Ohio | 41 | 32 | 7 | - | 1 | 1 | 3 |
| Chicago, Ill. | 507 | 193 | 105 | 121 | 72 | 16 | 16 |
| Cincinnati, Ohio | 114 | 76 | 18 | 10 | 5 | 5 | 4 |
| Cleveland, Ohio | 135 | 77 | 29 | 17 | 6 | 6 | 1 |
| Columbus, Ohio | 171 | 114 | 36 | 15 | 4 | 2 | 13 |
| Dayton, Ohio | 125 | 87 | 29 | 5 | 3 | 1 | 8 |
| Detroit, Mich. | 216 | 130 | 43 | 33 | 7 | 3 | 4 |
| Evansville, Ind. | 54 | 43 | 9 | 1 | 1 | - | 2 |
| Fort Wayne, Ind. | 66 | 46 | 11 | 4 | 3 | 2 | 4 |
| Gary, Ind. | 9 | 5 | 1 | 2 | 1 | - | 1 |
| Grand Rapids, Mich. | 52 | 35 | 7 | 4 | 1 | 5 | 6 |
| Indianapolis, Ind. | 177 | 117 | 28 | 18 | 8 | 8 | 13 |
| Madison, Wis. | 55 | 38 | 10 | 3 | 2 | 2 | 3 |
| Milwaukee, Wis. | 112 | 78 | 23 | 5 | 2 | 4 | 10 |
| Peoria, Ill. | 38 | 29 | 4 | 4 | - | 1 | 2 |
| Rockford, Ill. | 44 | 35 | 7 | 2 | - | - | 3 |
| South Bend, Ind. | 55 | 41 | 8 | 5 | 2 | 1 | 2 |
| Toledo, Ohio | 93 | 74 | 15 | 3 | 1 | - | 6 |
| Youngstown, Ohio | 67 | 58 | 6 | 3 | - | - | 1 |
| W.N. CENTRAL | 787 | 536 | 136 | 62 | 14 | 25 | 43 |
| Des Moines, Iowa | 34 | 30 | 3 | - | - | 1 | - |
| Duluth, Minn. | 30 | 23 | 4 | 2 | - | 1 | 2 |
| Kansas City, Kans. | 42 | 27 | 7 | 7 | 1 | - | - |
| Kansas City, Mo. | 111 | 59 | 22 | 9 | 4 | 6 | 4 |
| Lincoln, Nebr. | 27 | 22 | 4 | 1 | - | - | 4 |
| Minneapolis, Minn. | 206 | 144 | 39 | 16 | 3 | 4 | 22 |
| Omaha, Nebr. | 69 | 50 | 11 | 6 | - | 2 | 3 |
| St. Louis, Mo. | 137 | 86 | 30 | 10 | 4 | 7 | 1 |
| St. Paul, Minn. | 85 | 47 | 9 | 7 | - | 2 | 5 |
| Wichita, Kans. | 66 | 50 | 7 | 4 | 2 | 2 | 2 |
| S. ATLANTIC | 1,319 | 831 | 237 | 173 | 42 | 35 | 59 |
| Atlanta, Ga. | 197 | 120 | 34 | 31 | 6 | 6 | 4 |
| Baltimore, Md. | 183 | 106 | 32 | 30 | 7 | 8 | 16 |
| Charlotte, N.C. | 95 | 73 | 18 | 1 | 3 | - | 4 |
| Jacksonville, Fla. | 121 | 85 | 20 | 12 | 2 | 2 | 10 |
| Miami, Fla. | 120 | 76 | 20 | 19 | 2 | 3 | - |
| Norfolk, Va. | 62 | 34 | 15 | 7 | 3 | 3 | 2 |
| Richmond, Va. | 83 | 61 | 13 | 7 | 2 | - | 1 |
| Savannah, Ga. | 54 | 37 | 8 | 8 | 1 | 2 | 3 |
| St. Petersburg, Fla. | 78 | 55 | 14 | 3 | 4 | 2 | 2 |
| Tampa, Fla. | 162 | 111 | 34 | 12 | 1 | 3 | 13 |
| Washington, D.C. | 159 | 70 | 31 | 41 | 11 | 6 | 4 |
| Wilmington, Del. | 5 | 3 | - | 2 | - | - | - |
| E.S. CENTRAL | 695 | 460 | 137 | 56 | 29 | 13 | 46 |
| Birmingham, Ala. | 120 | 78 | 25 | 8 | 5 | 4 | 2 |
| Chattanooga, Tenn. | 65 | 39 | 15 | 5 | 3 | 3 | 5 |
| Knoxville, Tenn. | 63 | 38 | 16 | 4 | 4 | 1 | 6 |
| Lexington, Ky. | 60 | 32 | 16 | 11 | - | 1 | 2 |
| Memphis, Tenn. | 169 | 112 | 32 | 12 | 11 | 2 | 18 |
| Mobile, Ala. | 70 | 51 | 16 | 2 | 1 | - | 4 |
| Montgomery, Ala. | 59 | 41 | 6 | 9 | 2 | 1 | 2 |
| Nashville, Tenn. | 89 | 69 | 11 | 5 | 3 | 1 | 7 |
| W.S. CENTRAL | 1,412 | 886 | 268 | 166 | 53 | 36 | 77 |
| Austin, Tex. | 86 | 47 | 11 | 7 | 1 | - | 4 |
| Baton Rouge, La. | 29 | 24 | 1 | 2 | 1 | 1 | - |
| Corpus Christi, Tex. | 40 | 24 | 7 | 7 | 1 | 1 | 3 |
| Dallas, Tex. | 198 | 121 | 37 | 27 | 10 | 3 | 4 |
| El Paso, Tex. | 69 | 35 | 21 | 9 | 3 | 1 | 7 |
| Ft. Worth, Tex. | 98 | 69 | 17 | 6 | 3 | 3 | 4 |
| Houston, Tex. | 348 | 213 | 70 | 48 | 9 | 8 | 27 |
| Little Rock, Ark. | 53 | 28 | 11 | 8 | 6 | - | 1 |
| New Orleans, La. | 154 | 83 | 25 | 27 | 5 | 11 | - |
| San Antonio, Tex. | 193 | 124 | 41 | 15 | 9 | 4 | 13 |
| Shreveport, La. | 63 | 45 | 14 | 2 | 1 | 1 | 7 |
| Tulsa, Okla. | 101 | 73 | 13 | 8 | 4 | 3 | 7 |
| MOUNTAIN | 741 | 480 | 122 | 81 | 33 | 25 | 43 |
| Albuquerque, N.M. | 60 | 39 | 14 | 3 | 1 | 3 | 3 |
| Colo. Springs, Colo. | 32 | 19 | 8 | 4 | - | 1 | 2 |
| Denver, Colo. | 62 | 42 | 7 | 8 | 3 | 2 | 5 |
| Las Vegas, Nev. | 173 | 97 | 36 | 27 | 8 | 5 | 7 |
| Ogden, Utah | 22 | 15 | 5 | 2 | - | - | 3 |
| Phoenix, Ariz. | 141 | 96 | 14 | 15 | 9 | 7 | 9 |
| Pueblo, Colo. | 27 | 19 | 5 | 1 | 2 | - | 1 |
| Salt Lake City, Utah | 98 | 65 | 15 | 7 | 7 | 4 | 6 |
| Tucson, Ariz. | 126 | 88 | 18 | 14 | 3 | 3 | 7 |
| PACIFIC | 1,850 | 1,259 | 301 | 205 | 46 | 34 | 104 |
| Berkeley, Calif. | 11 | 7 | 2 | 2 | - | - | - |
| Fresno, Calif. | 108 | 77 | 15 | 9 | 2 | 5 | 4 |
| Glendale, Calif. | 16 | 15 | 1 | - | - | - | 1 |
| Honolulu, Hawaii | 68 | 45 | 13 | 4 | 2 | 2 | - |
| Long Beach, Calif. | 85 | 65 | 9 | 9 | 1 | 1 | 12 |
| Los Angeles, Calif. | 512 | 330 | 84 | 74 | 17 | 3 | 20 |
| Pasadena, Calif. | 32 | 27 | 3 | 2 | - | - | 2 |
| Portland, Oreg. | 134 | 90 | 23 | 13 | 5 | 2 | - |
| Sacramento, Calif. | 156 | 105 | 30 | 13 | 3 | 5 | 18 |
| San Diego, Calif. | 156 | 104 | 25 | 19 | 6 | 2 | 16 |
| San Francisco, Calif. | 114 | 77 | 20 | 15 | 1 | 1 | 9 |
| San Jose, Calif. | 171 | 128 | 23 | 11 | 3 | 6 | 16 |
| Santa Cruz, Calif. | 24 | 14 | 5 | 4 | 1 | - | 1 |
| Seattle, Wash. | 121 | 79 | 19 | 16 | 4 | 3 | 3 |
| Spokane, Wash. | 41 | 30 | 9 | - | - | 2 | - |
| Tacoma, Wash. | 103 | 66 | 20 | 14 | 1 | 2 | 2 |
| TOTAL | 11,590¶ | 7,539 | 2,051 | 1,311 | 395 | 273 | 607 |

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.
†Pneumonia and influenza.
§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.
¶Total includes unknown ages.
U: Unavailable.

*Rift Valley Fever — Continued*

IgM or IgG antibody). Four of these children had no evidence of recent infection (i.e., only IgG).

To monitor the potential spread of RVF from southern Egypt (i.e., Aswan) to the Nile Delta region of northern Egypt in 1993, RVF surveillance was conducted at fever hospitals, among persons in high-risk occupational groups (e.g., abattoir and veterinary workers), and in selected animal populations. In October 1993, RVFV was isolated from a 17-year-old woman with fatal hemorrhagic disease hospitalized in Sharkiya in the Nile Delta. In 1993, RVF was documented among persons residing in the governorates of Dakhla, Damietta, Gharbiya, Giza, Ismailia, Kafr al-Sheikh, Minufiya, Port Said, Qena, and Sharkiya.

*Reported by: MS El Sharkawy, DPH, Director General (retired), Communicable Diseases Control Dept, Ministry of Health; S Abdel Raheem, DPH, First Undersecretary (retired), Preventive Sector, Ministry of Health; S Oun, DPH, Director General, Preventive Sector, Ministry of Health, Aswan Governorate; AM Abd El-Ghafar, MBBCh, M Khalifa, MBBCh/MSc, MH El Sakka, MBBCh, MF Abdel-Wahab, MBBCh, SA Abdel-Rahman, MBBCh, MF Ahmed, MBBCh, A El-Sheikh, MBBCh, FM Abdeen, MBBCh, Egyptian Counterpart, IZE Imam, MD, Technical Advisor, E Mansour, MD, Director, Field Epidemiology Training Program, Child Survival Project, Ministry of Health. RR Arthur, PhD, BAM Botros, PhD, CM Calamaio, DVM, JR Campbell, PhD, SE Cope, PhD, CE Cummings, MD, RG Hibbs, MD, S Presley, PhD, GR Rodier, MD, AW Salib, AK Soliman, DVM, TA Tantawy, PhD, US Naval Medical Research Unit No. 3, Cairo. JC Morrill, DVM, US Army Medical Research Institute of Infectious Diseases/Consultant, World Health Organization. A Gad, PhD, MA Darwish, MD, Ain Shams Univ Faculty of Medicine, Cairo. Div of Communicable Diseases, World Health Organization, Geneva. Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; International Br, Div of Field Epidemiology, Epidemiology Program Office, CDC.*

**Editorial Note:** RVF, an acute febrile illness often with hemorrhagic manifestations (*4*), is caused by an RNA-containing virus of the Bunyaviridae family. RVF epizootics are characteristically associated with domesticated ruminants (e.g., sheep, cattle, buffalo, goats, and camels) and humans living in close proximity. The reservoir for RVFV is unknown. RVFV initially was detected in Kenya during the 1930s when a febrile illness, characterized by spontaneous abortions in ewes and high death rates in lambs, also caused fever and myalgias in veterinarians investigating the outbreak (*5*). During 1977–78, the first epidemic of RVF reported in Egypt and the largest recorded thus far was associated with approximately 18,000 cases and 598 deaths in humans (*4,6*). With the exception of the two outbreaks in Egypt, RVFV is known to circulate only in sub-Saharan Africa; outbreaks previously have been reported in Cameroon, Central African Republic, Madagascar, Mali, Mauritania, Mozambique, Nigeria, Senegal, South Africa, Sudan, Tanzania, Zambia, and Zimbabwe (*7,8*).

Retrospective serosurveys have indicated that RVFV was not present in Egypt before the 1977–78 epidemic (*4,6*). In the 1993 studies of RVF, among children born after the 1977 outbreak, nearly all those with RVFV antibody had serologic evidence of recent infection, suggesting that RVFV probably was not circulating in the study areas during the interepidemic period. Ongoing surveillance is being conducted at fever hospitals, among persons in high-risk occupational categories, and in sentinel animal populations. After the outbreak in Egypt was recognized in 1993, vaccination of livestock with killed RVFV vaccine was intensified. In 1994, live-attenuated RVFV vaccine was used to vaccinate nearly 6 million domesticated animals throughout Egypt. Because RVF cases continued to occur 3–4 years after the 1977 epidemic began, additional human cases may be expected during the next several years, particularly

*Rift Valley Fever — Continued*

among persons at high risk, despite reported widespread animal vaccination with live attenuated vaccine.

The nested epidemiologic studies in this report indicated that sleeping outdoors every night could possibly be a risk factor for exposure to mosquito vectors. Similarly, the slaughter-related factors may be proxies for exposure(s) to infected animals. The findings in this report are among the first published studies systematically analyzing various risk factors for human RVFV infection in rural popula- tions in Africa (*8*).

The species of several genera of mosquitoes (including *Aedes, Anopheles, Culex, Erethmapodites,* and *Mansonia*) are capable of transmitting RVFV and may be important vectors during epizootics (*4,6–9*). Although widespread aerial insecticide application could decrease mosquito vectors, this strategy is expensive and difficult to implement. Human transmission may occur following exposure to either the blood or viscera of infected animals (e.g., during slaughtering) or to instruments, needles, or laboratory specimens contaminated with the virus (*8,10*). RVFV vaccine for humans is not commercially available.

Because of the epizootic nature of RVF, human infection occurs primarily among persons living in small villages and rural areas with exposure to potentially infected livestock or infected arthropod vectors (i.e., mosquitoes) or among persons in high-risk occupations (e.g., veterinarians and slaughterhouse workers). RVF infection has not been documented in either tourists or foreign nationals living in Egypt. Personal measures that may decrease RVF transmission include use of bednets and/or effective mosquito repellents containing diethyl meta-toluidine (if available) and minimizing exposures to blood or tissues (e.g., viscera, abortus, and retained placenta) of animals potentially infected with RVF. Universal precautions during the handling of blood, blood products, medical instruments, or syringes should minimize the risk for disease among workers in health facilities or laboratories.

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*International Notes*

## Health Status of Displaced Persons Following Civil War — Burundi, December 1993–January 1994

In Burundi (1990 population: 5.7 million), located in central-east Africa, seasonal epidemics of dysentery caused by *Shigella dysenteriae* type 1 (Sd1) have been documented each year since 1980. The assassination of the president of Burundi on October 21, 1993, resulted in widespread violence involving major tribal groups. By December, an estimated 130,000 persons had become displaced within the country, and approximately 683,000 persons had fled to Rwanda, Tanzania, or Zaire. Many displaced persons fled from rural areas to villages and towns; sanitation in these areas became inadequate as a result of the rapid influx of many persons. Because the civil war disrupted government services, the national routine disease surveillance system ceased to function in November. To assess the health status of displaced persons, rapid surveillance systems were established at sentinel sites throughout Burundi and in refugee camps in Rwanda. This report summarizes findings from these surveillance activities during December 1993–January 1994.

### Burundi

In December 1993, the Burundi Ministry of Health (MOH) established a sentinel disease reporting system which included the selection of one rural outpatient clinic in each of the 15 provinces. A one-page reporting form was designed to record for each week the number of new cases of seven diseases with epidemic potential (i.e., cholera, dysentery, and other diarrhea; lower respiratory tract infections; malaria; measles; and meningitis), intentional injuries, and the total number of new clinic visits. Standard case definitions developed by the MOH were disseminated to participating sites. Completed surveillance forms were sent weekly to the MOH; nongovernmental organizations (NGOs) collected and transported surveillance forms. The MOH then issued a weekly surveillance report for distribution to staff in health centers and hospitals, MOH officials at the national level, and NGOs involved with relief activities.

Because the populations of sentinel clinic catchment areas were not available to calculate disease incidence rates, the analysis of surveillance data focused on calculation of weekly proportional morbidity (i.e., number of new visits for a reported disease divided by total number of new visits for all diseases). Data were analyzed from the 12 sites reporting complete information for December 13, 1993–January 9, 1994. Dysentery and malaria (defined as diarrhea with visible blood and fever without another apparent cause, respectively) were the most common causes of morbidity, accounting for 29% and 28% of all new visits to health centers, respectively. In comparison, during December 14, 1992–January 10, 1993, national surveillance data indicated that dysentery and malaria accounted for 6% and 23% of all new visits to health centers. Lower respiratory tract infections and nonbloody diarrhea accounted for 3% of all new visits during the crisis; meningitis, measles, intentional injuries, and cholera each accounted for less than 1% of all new visits. Weekly estimates of proportional morbidity for dysentery and malaria and counts of the total number of new visits for any cause were stable during the 4-week period. The MOH and collaborating organizations used these

*Burundi — Continued*

sentinel data to establish dysentery and malaria as priority health problems and to mobilize resources.

**Rwanda**

By October 31, 1993, an estimated 300,000 refugees from Burundi had settled in Rwanda. Health posts were established by Médecins Sans Frontières (MSF) in each of four refugee camps (total population: 54,921) in the commune of Kibaye. Standard case definitions were used to collect surveillance information during all health post visits. Camp populations were determined by census. Mortality surveillance was conducted by counting the numbers of burial shrouds distributed, the numbers of new graves dug, the numbers of deaths reported to health posts by families, and daily visits by health workers to tents and shelters.

During December 1, 1993–January 17, 1994, the most commonly reported causes of new visits to health posts were malaria, dysentery, nonbloody diarrhea, and lower respiratory tract infections, accounting for 38%, 14%, 7%, and 6%, respectively, of all new visits to health posts. The mean weekly dysentery attack rate during this period was 3.8 cases per 100 persons; the rate was highest for children aged <5 years (5.8 cases per 100 children).

During this period, the average daily crude mortality rate was 3.0 deaths per 10,000 persons—an annualized rate of approximately 10%. Of the total 765 deaths, 433 (57%) were attributed to dysentery (estimated case-fatality rate=3.2%). Other causes of mortality were malaria (19%), acute lower respiratory tract infections (6%), and malnutrition (6%).

Based on these findings, MSF emphasized treatment of dysentery with a complete course of nalidixic acid and improvement of basic sanitation and hygiene. The weekly number of dysentery cases in these camps peaked during late November and rapidly decreased during December.

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**Editorial Note:** The surveillance approaches described in this report demonstrate how simple, rapid reporting systems can provide decision-makers with useful information about the health status of populations affected by conflict and massive population displacement. In particular, weekly proportional morbidity and daily death rates can be used to identify priority disease-control activities, monitor trends, and evaluate the effectiveness of health interventions. Proportional morbidity may be especially useful as a means of monitoring health status when population estimates are not available and incidence rates cannot be calculated. Death rates are one of the most sensitive indicators of health status; the goal of emergency relief efforts should be to reduce the crude mortality rate to less than one death per 10,000 persons (*1*). Standardized clinical case definitions can reduce variability in reporting, particularly when there is rapid turnover in clinic staff.

Since 1991, dysentery epidemics caused by Sd1 have occurred in eight countries in southern Africa (Angola, Burundi, Malawi, Mozambique, Rwanda, Tanzania, Zaire, and Zambia). Epidemic dysentery is a particular problem among refugee populations in which crowding and poor sanitation facilitate transmission. In refugee and displaced

*Burundi — Continued*

populations, epidemic dysentery has been characterized by substantially higher incidence rates than in nonrefugee populations (*2*) and high proportional mortality—a pattern underscored by the findings in Burundi. The proportion of dysentery-associated deaths among Burundian refugees in Rwanda (57%) was similar to that among Burundian refugees in Tanzania (50%) (*3*).

Treatment with an effective antimicrobial (e.g., ampicillin, cotrimoxazole, and some quinolone agents) can reduce the severity and duration of shigellosis if the organism is susceptible to the antimicrobial (*4*). Since 1993, Sd1 strains from Burundi have been resistant to ampicillin and cotrimoxazole and moderately susceptible to nalidixic acid; the case-fatality rate was lower among Burundian refugees in Rwanda treated with nalidixic acid (3%) than among patients in Burundi treated with cotrimoxazole before the crisis (10%) (*5*). However, because resistance to nalidixic acid among Sd1 isolates previously has been widespread in Burundi and is increasing again (*5,6*), the effectiveness of nalidixic acid as a treatment for Sd1 infections may diminish.

The problem of rapid acquisition of antimicrobial resistance in the treatment of *Shigella* dysentery in Africa underscores the need for identification of measures to prevent transmission of epidemic dysentery in refugee and internally displaced populations. For example, handwashing with soap and water can reduce secondary transmission of *Shigella* infections between household members; in Burundi, poor hygienic practices and lack of soap in the household are risk factors for acquiring dysentery (*2*). The most effective strategies to control transmission of Sd1 in refugee camps and among displaced persons may be distributing soap, ensuring access to water, promoting handwashing before eating or preparing food and after defecation, and properly disposing of fecal material.

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